

Figure 1

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ORF2 5147 ATGCGCCCTCGGCCTATTTTGCTGTTGCTCCTCATGTTTCTGCCTATGCT
 v10 v v v v
 ORF2 5197 GCCCGCGCCACCGCCCGGTCAGCCGTCTGGCCGCCGTCGTGGGCGGCGCA
 v60 v v v v
 ORF2 5247 GCGGCGGTTCCGGCGGTGGTTTCTGGGGTGACCGGGTTGATTCTCAGCCC
 v110 v v v v
 ORF2 5297 TTCGCAATCCCCCTATATTCATCCAACCAACCCCTTCGCCCCCGATGTCAC
 v160 v v v v
 ORF2 5347 CGCTGCGGCCGGGGCTGGACCTCGTGTTGCCAACCCGCCCCGACCACTCG
 v210 v v v v
 ORF2 5397 GCTCCGCTTGGCGTGACCAGGCCAGCGCCCCGCCGTTGCCTCACGTCGT
 v260 v v v v
 ORF2 5447 AGACCTACCACAGCTGGGGCCGCGCCGCTAACCGCGGTCGCTCCGGCCCA
 v310 v v v v
 ORF2 5497 TGACACCCCGCCAGTGCCTGATGTTGACTCCCGCGGCGCCATCCTGCGCC
 v360 v v v v
 ORF2 5547 GGCAGTATAACCTATCAACATCTCCCCTTACTTCTTCCGTGGCCACCGGT
 v410 v v v v
 ORF2 5597 ACAAACTTGGTTCTATACGCCGCTCCTCTTAGCCCACTTCTACCCCTCCA
 v460 v v v v
 ORF2 5647 GGACGGCACCAATACTCATATAATGGCCACAGAAGCTTCTAATTATGCCC
 v510 v v v v
 ORF2 5697 AGTACCGGGTTGCTCGTGCCACAATTCGCTACCGCCCGCTGGTCCCCAAC
 v560 v v v v
 ORF2 5747 GCTGTTGGTGGCTACGCCATCTCCATCTCGTTCTGGCCACAGACCACCAC
 v610 v v v v
 ORF2 5797 CACCCCGACGTCCGTTGACATGAATTCAATAACCTCGACGGATGTTTCGTA
 v660 v v v v
 ORF2 5847 TTTTAGTCCAGCCCGGCATAGCCTCCGAGCTTGTTATCCCAAGTGAGCGC
 v710 v v v v

Figure 2A

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          v760      v      v      v      v
ORF2 5897 CTACACTACCGTAACCAAGGTTGGCGCTCTGTTGAGACCTCCGGGGTGGC

          v810      v      v      v      v
ORF2 5947 GGAGGAGGAGGCCACCTCTGGTCTTGTATGCTCTGCATACATGGCTCAC

          v860      v      v      v      v
ORF2 5997 CTGTAAATTCTTATACTAATACACCTTATACCGGTGCCCTCGGGCTGTTG

          v910      v      v      v      v
ORF2 6047 GACTTTGCCCTCGAACTTGAGTTCCGCAACCTCACCCCCGGTAATACCAA

          v960      v      v      v      v
ORF2 6097 CACGCGGGTCTCCCGTTACTCCAGCACTGCCCCGTCACCGCCTTCGTCGCG

          v1010     v      v      v      v
ORF2 6147 GTGCAGATGGGACTGCCGAGCTTACCACCACGGCTGCTACCCGCTTCATG

          v1060     v      v      v      v
ORF2 6197 AAGGACCTCTATTTTACTAGTACTAATGGTGTCGGTGAGATCGGCCGTGG

          v1110     v      v      v      v
ORF2 6247 GATAGCGCTTACCCTGTTTAACTTGCTGACACCCTGCTTGCGGGTCTAC

          v1160     v      v      v      v
ORF2 6297 CGACAGAATTGATTTTCGTCGGCTGGTGGCCAGCTGTTCTACTCTCGTCCC
E2      1      CAGCTGTTCTACTCTCGTCCC

          v1210     v      v      v      v
ORF2 6347 GTCGTCTCAGCCAATGGCGAGCCGACTGTTAAGCTTTATACATCTGTAGA
E2      22      GTCGTCTCAGCCAATGGCGAGCCGACTGTTAAGCTTTATACATCTGTAGA

          v1260     v      v      v      v
ORF2 6397 GAATGCTCAGCAGGATAAGGGTATTGCAATCCCGCATGACATCGACCTCG
E2      72      GAATGCTCAGCAGGATAAGGGTATTGCAATCCCGCATGACATCGACCTCG

          v1310     v      v      v      v
ORF2 6447 GGGAGTCTCGTGTAGTTATTTCAGGATTATGACAACCAACATGAGCAGGAC
E2      122     GGGAGTCTCGTGTAGTTATTTCAGGATTATGACAACCAACATGAGCAGGAC

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Figure 2B

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		v1360	v	v	v	v
ORF2	6497	CGACCGACACCTTCCCCAGCCCCATCGCGCCCTTTTCTGTCCTCCGAGC				
					
E2	172	CGACCGACACCTTCCCCAGCCCCATCGCGCCCTTTTCTGTCCTCCGAGC				
		v1410	v	v	v	v
ORF2	6547	TAATGATGTGCTTTGGCTTTCTCTCACCGCTGCCGAGTATGACCAGTCCA				
					
E2	222	TAATGATGTGCTTTGGCTTTCTCTCACCGCTGCCGAGTATGACCAGTCCA				
		v1460	v	v	v	v
ORF2	6597	CTTACGGCTCTTCGACCGGCCAGTCTATGTCTCTGACTCTGTGACCTTG				
					
E2	272	CTTACGGCTCTTCGACCGGCCAGTCTATGTCTCTGACTCTGTGACCTTG				
		v1510	v	v	v	v
ORF2	6647	GTTAATGTTGCGACCGGCGCGCAGGCCGTTGCCCGGTCACTCGACTGGAC				
					
E2	322	GTTAATGTTGCGACCGGCGCGCAGGCCGTTGCCCGGTCACTCGACTGGAC				
		v1560	v	v	v	v
ORF2	6697	CAAGGTCACACTTGATGGTCGCCCCCTTTCCACCATCCAGCAGTATTCAA				
					
E2	372	CAAGGTCACACTTGATGGTCGCCCCCTTTCCACCATCCAGCAGTATTCAA				
		v1610	v	v	v	v
ORF2	6747	AGACCTTCTTTGTCCTGCCGCTCCGCGGTAAGCTCTCCTTTTGGGAGGCA				
					
E2	422	AGACCTTCTTTGTCCTGCCGCTCCGCGGTAAGCTCTCCTTTTGGGAGGCA				
		v1660	v	v	v	v
ORF2	6797	GGTACTACTAAAGCCGGGTACCCTTATAATTATAACACCACTGCTAGTGA				
					
E2	472	GGTACTACTAAAGCCGGGTACCCTTATAATTATAACACCACTGCTAGTGA				
		v1710	v	v	v	v
ORF2	6847	CCAACTGCTCGTTGAGAATGCCGCTGGGCATCGGGTTGCTATTTCCACTT				
					
E2	522	CCAACTGCTCGTTGAGAATGCCGCTGGGCATCGGGTTGCTATTTCCACTT				
		v1760	v	v	v	v
ORF2	6897	ACACCACTAGCCTGGGTGCTGGTCCCGTCTCTATTTCCGCGGTTGCTGTT				
					
E2	572	ACACCACTAGCCTGGGTGCTGGTCCCGTCTCTATTTCCGCGGTTGCTGTT				

Figure 2C

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                v1810      v      v      v      v
ORF2 6947 TTAGCCCCCCTCTCCGCGCTAGCATTGCTTGAGGATACCATGGACTACCC
          .....:.....:.....:.....:.....:.....:.....:
E2      622 TTAGCCCCCCTCTCCGCGCTAGCATTGCTTGAGGATACCATGGACTACCC
                Stop code

                v1860      v      v      v      v
ORF2 6997 TGCCCGCGCCCATACTTTCGATGACTTCTGCCCGGAGTGCCGCCCCCTTG
          .....:.....:.....:.....:.....:.....:
E2      672 TGCCCGCGCCCATACTTTCGATGACTTCTGCCCGGAGTGCCGCCCCCTTG

                v1910      v      v      v      v
ORF2 7047 GCCTCCAGGGCTGTGCTTTTTCAGTCTACTGTCGCTGAGCTTCAGCGCCTT
          .....:.....:.....:.....:.....:.....:
E2      722 GCCTCCAGGGCTGTGCTTTTTCAGTCTACTGTCGCTGAGCTTCAGCGCCTT

                                End of ORF2
                                ↓
                v1960      v      v      v      v
ORF2 7097 AAGATGAAGGTGGGTAAAACCTCGGGAGTTATAGTTTATTGCTTGTGCCC
          .....:.....:.....:.....:.....:.....:
E2      772 AAGATGAAGGTGGGTAAAACCTCGGGAGTTATAGTTTATT

                v2010      v      v      v      v
ORF2 7147 CCCTTCTTTCTGTTGCTTATTTCTCTTTTCTGCGTTCCGCGCTCCCTGAAA

ORF2 7197 AAA

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Figure 2D

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                v10      v      v      v      v
ORF3 5106 ATGAATAACATGTCTTTTGCTGCGCCCATGGGTTCGCGACCATGCGCCCT

                v60      v      v      v      v
ORF3 5156 CGGCCTATTTTGCTGTTGCTCCTCATGTTTCTGCCTATGCTGCCCGCGCC

                v110     v      v      v      v
ORF3 5206 ACCGCCCCGGTCAGCCGTCTGGCCGCCGTCTGTTGGCGGCGCAGCGGCGGTT

                v160     v      v      v      v
ORF3 5256 CCGGCGGTGGTTTCTGGGGTGACCGGGTTGATTCTCAGCCCTTCGCAATC

                v210     v      v      v      v
ORF3 5306 CCCTATATTCATCCAACCAACCCCTTCGCCCCCGATGTCACCGCTGCGGC

                v260     v      v      v      v
ORF3 5356 CGGGGCTGGACCTCGTGTTTCGCCAACCCGCCCCGACCACTCGGCTCCGCTT
                ::::::::::::::::::::::::::::::::::::::::::::
E3      1      GACCTCGTGTTTCGCCAACCCGCCCCGACCACTCGGCTCCGCTT

                v310     v      v      v      v
ORF3 5406 GGCGTGACCAGGCCAGCGCCCCGCCGTTGCCTCACGTCGTAGACCTACC
                ::::::::::::::::::::::::::::::::::::::::::::
E3      51     GGCGTGACCAGGCCAGCGCCCCGCCGTTGCCTCACGTCGTAGACCTACC

                v360     v
ORF3 5456 ACAGCTGGGGCCGCGCCGCTAA
                ::::::::::::::::::::::::::::
E3      101    ACAGCTGGGGCCGCGCCGCTAA

```

Figure 3

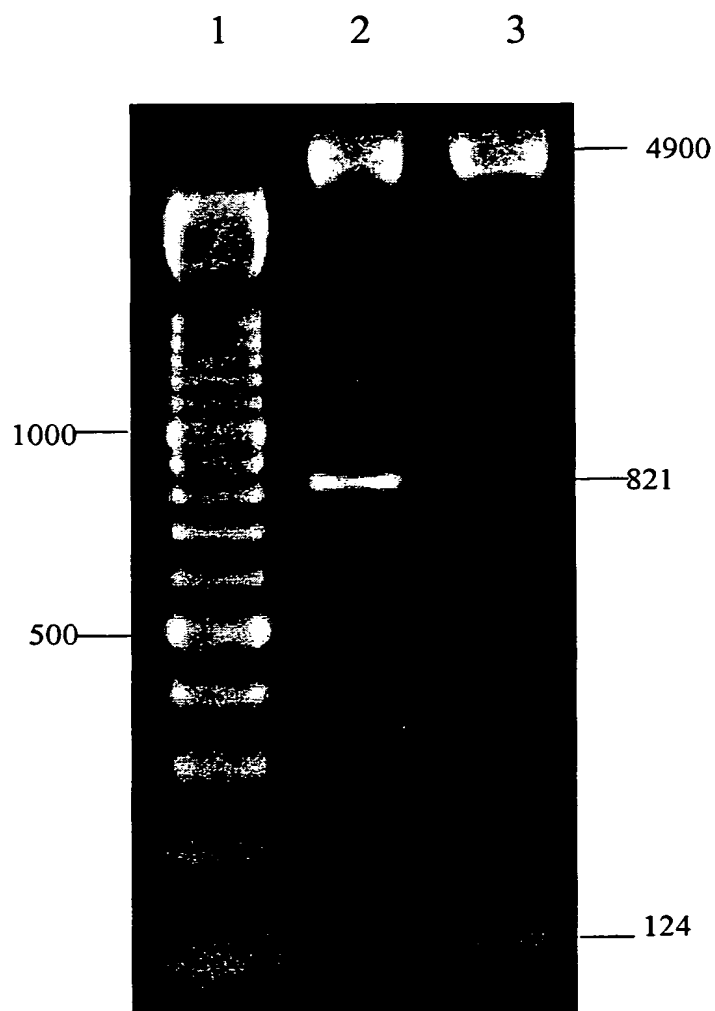
pE2 1 QLFYSRPVVSANGEPTVKLYTSVENAQQDKGIAIPHDIDLGESRVVIQDY
v10 v v v v
pE2 51 DNQHEQDRPTPSPAPSRPFSVLRANDVLWLSLTAAEYDQSTYGSSTGPVY
v60 v v v v
pE2 101 VSDSVTLNVNATGAQAVARSLDWTkVTLdGRPLSTIQQYSKTFFVLPLRG
v110 v v v v
pE2 151 KLSFWEAGTTKAGYPYNYNTTASDQLLVENAAGHRVAISTYTTSLGAGPV
v160 v v v v
pE2 201 SISAVAVLAPPPR
v210

Figure 4

v v v
pE3 1 DLVFANPPDHSAPLGVTRPSAPPLPHVVDLPQLGPRR.

Figure 5

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**Figure 6**

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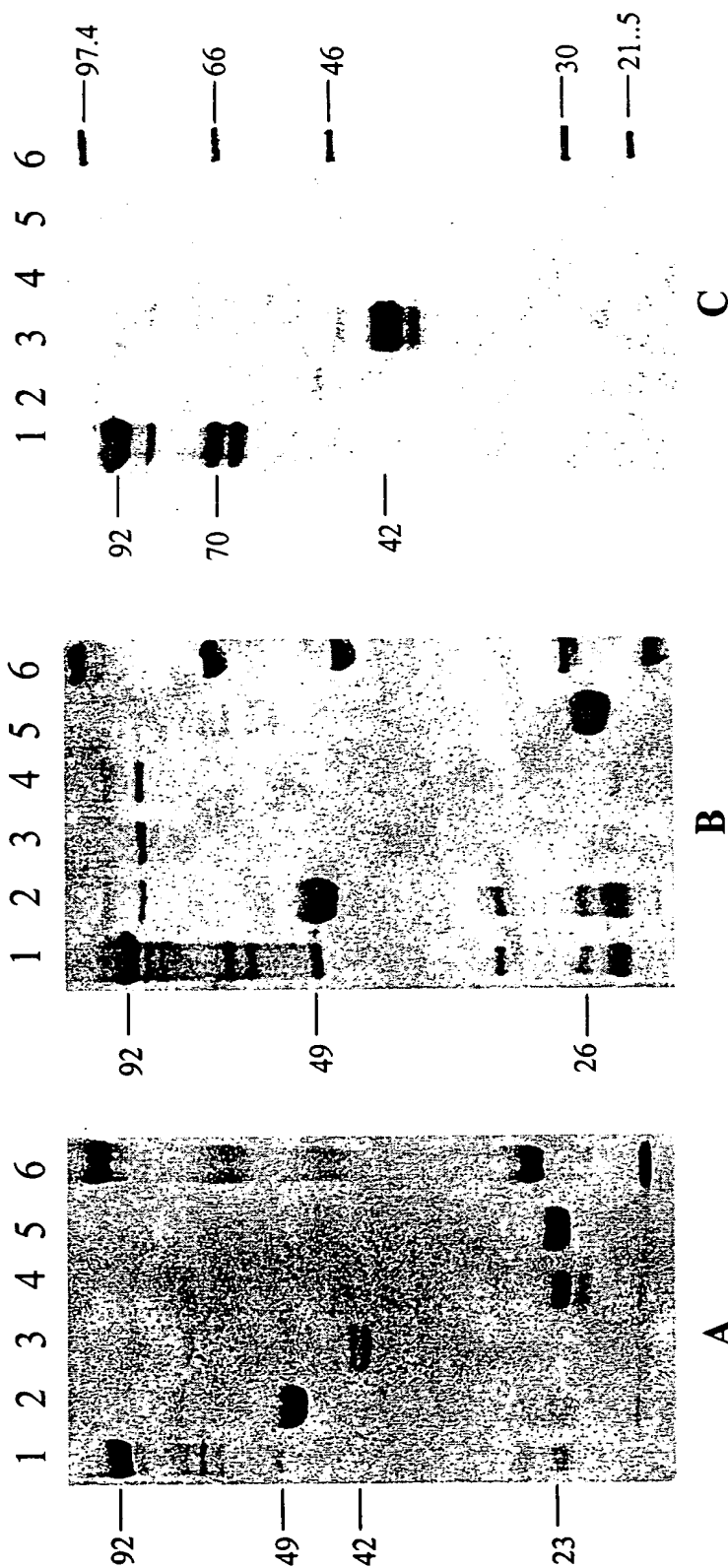
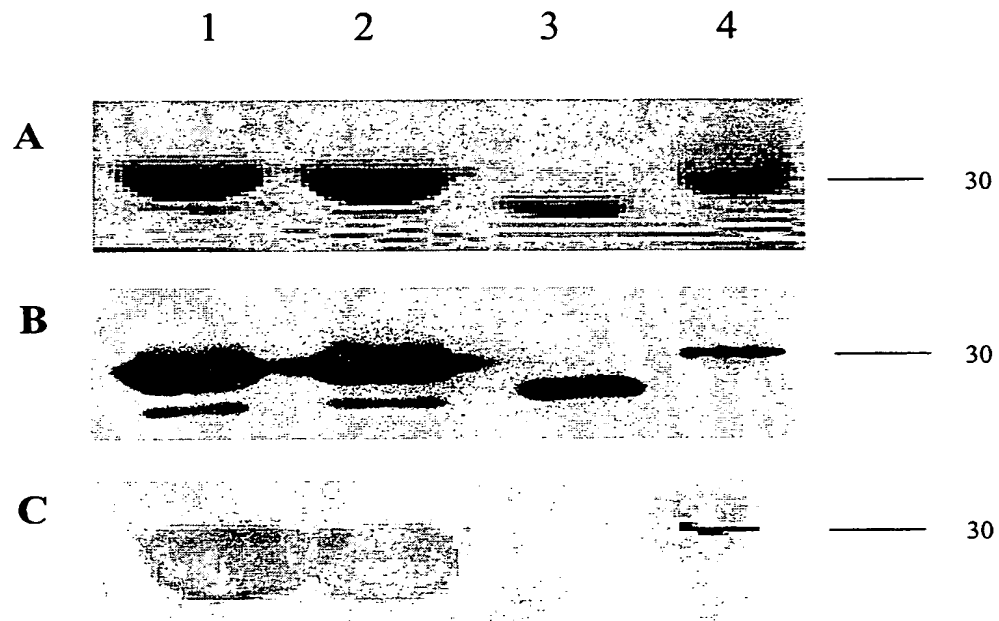


Figure 7

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**Figure 8**

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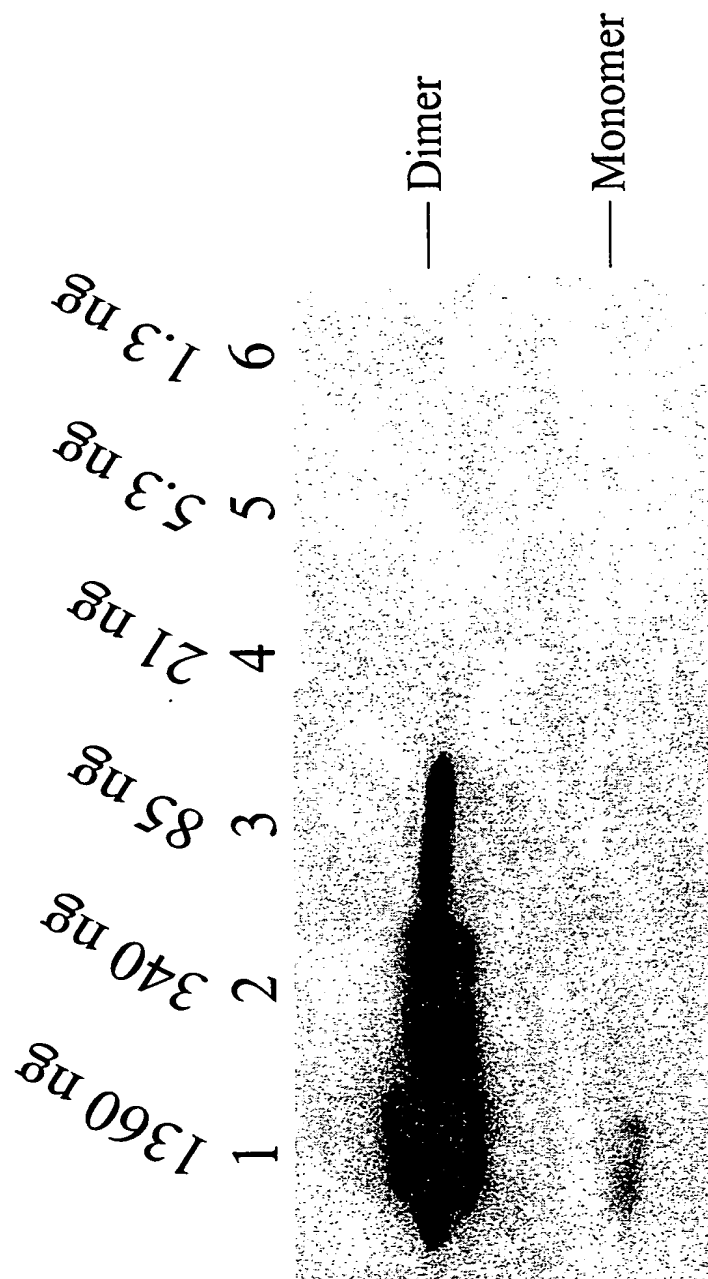


Figure 9

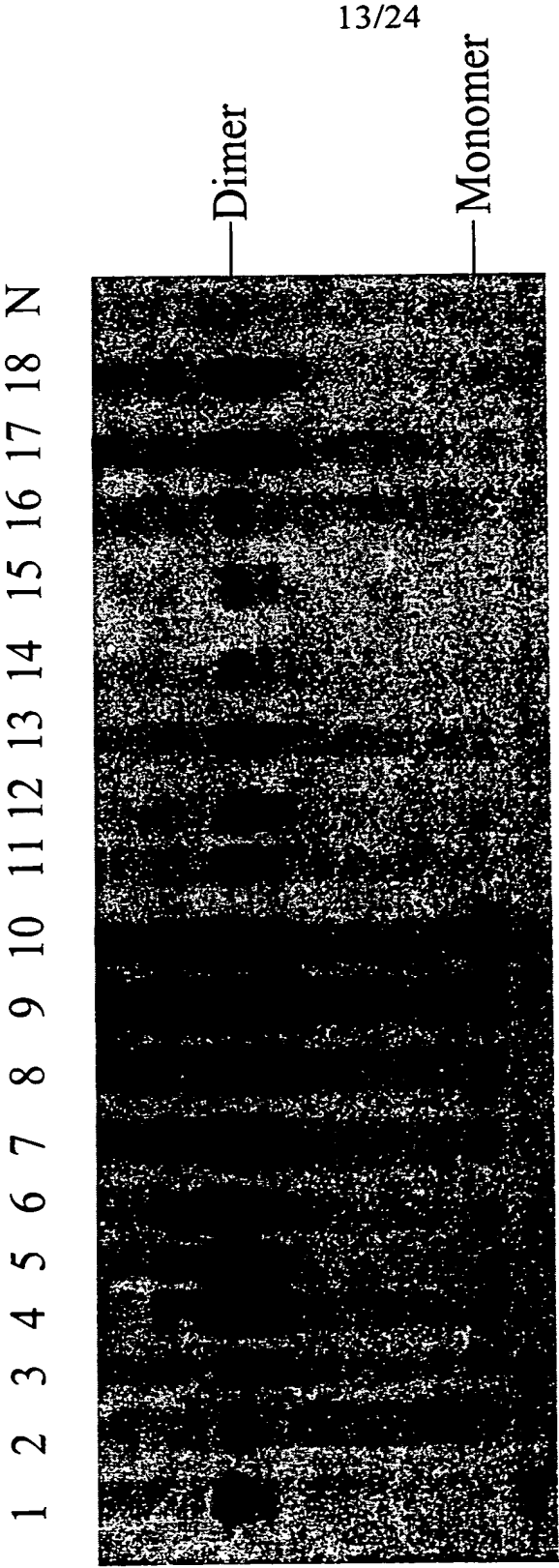


Figure 10

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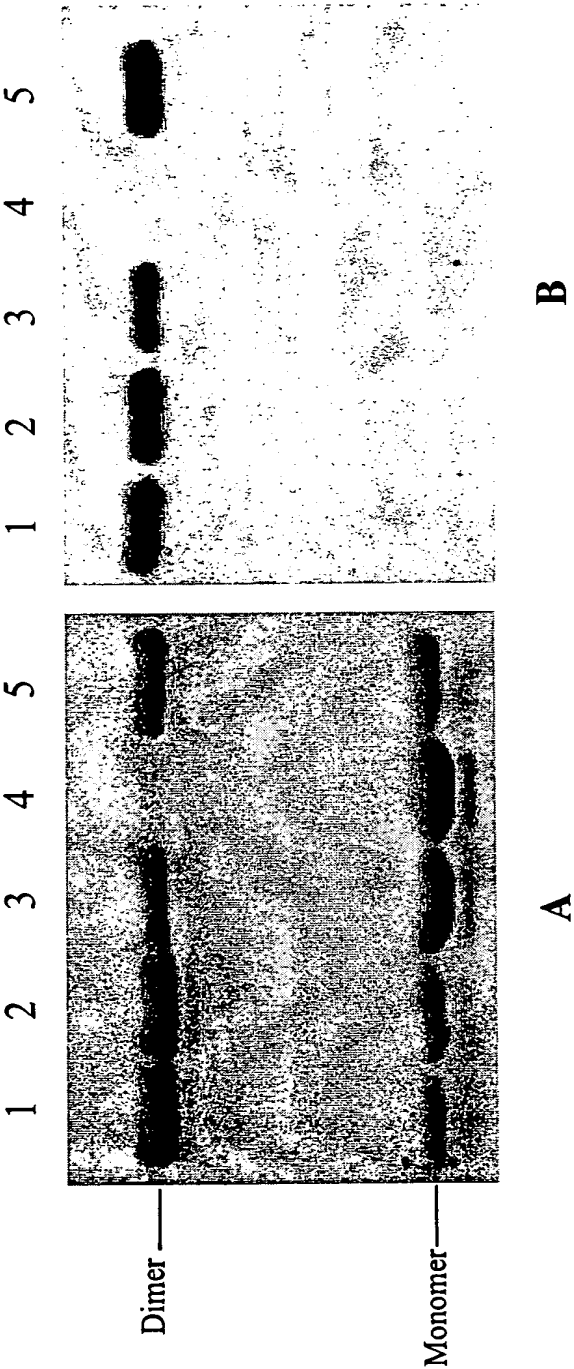
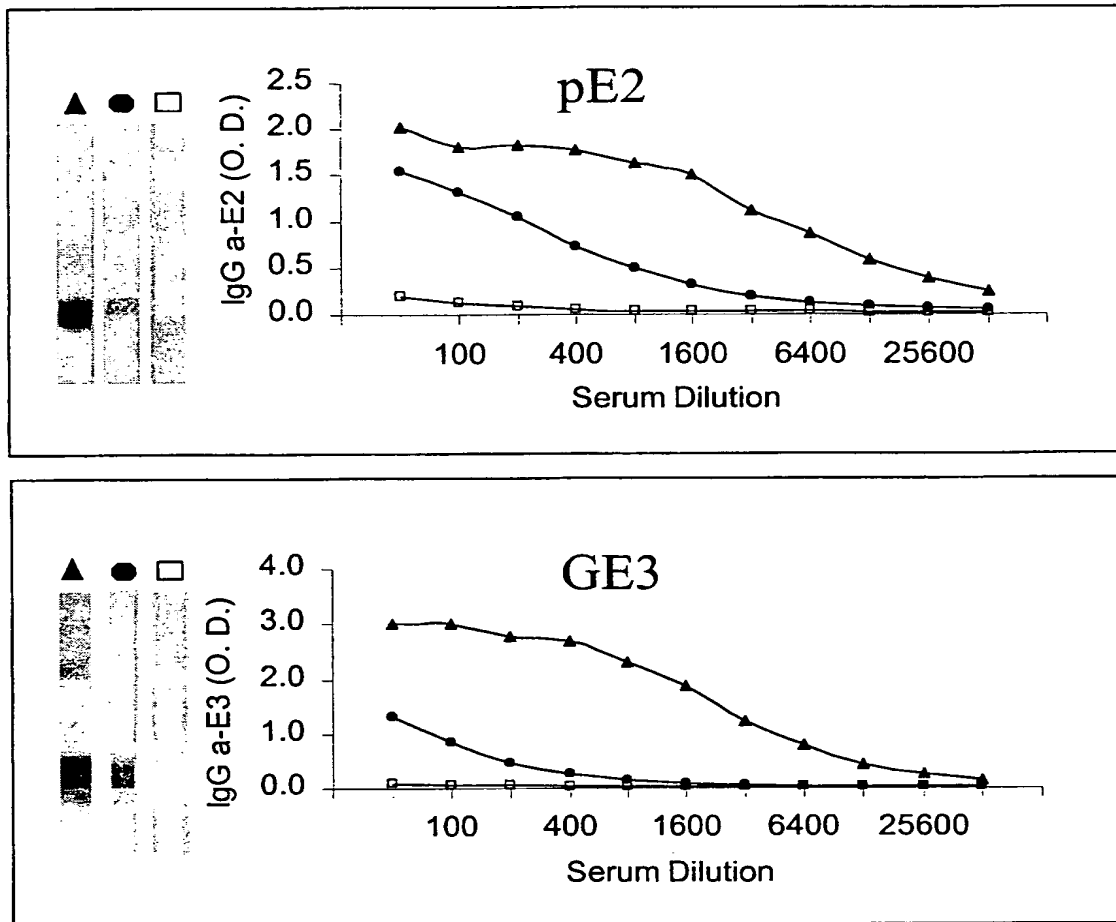
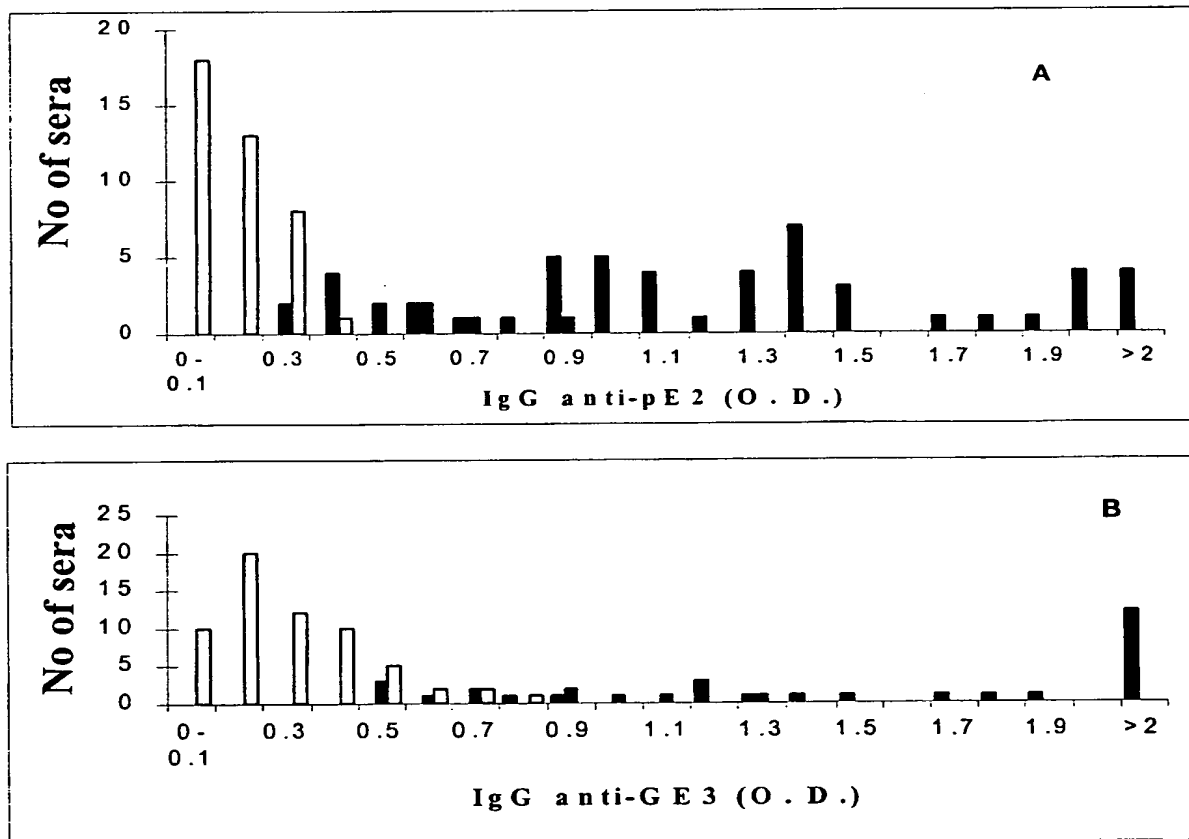


Figure 11

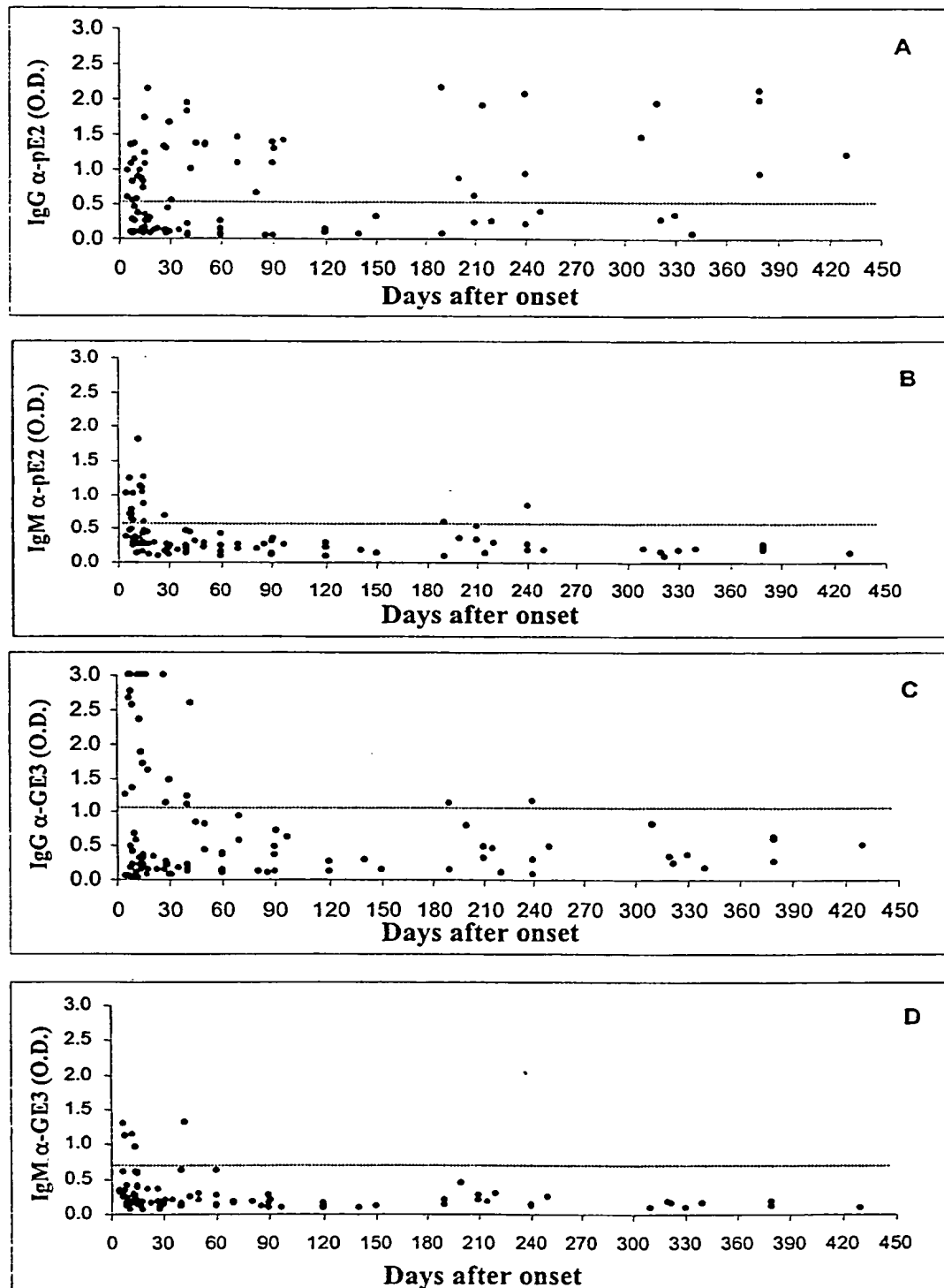
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**Figure 12**

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**Figure 13**

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**Figure 14**

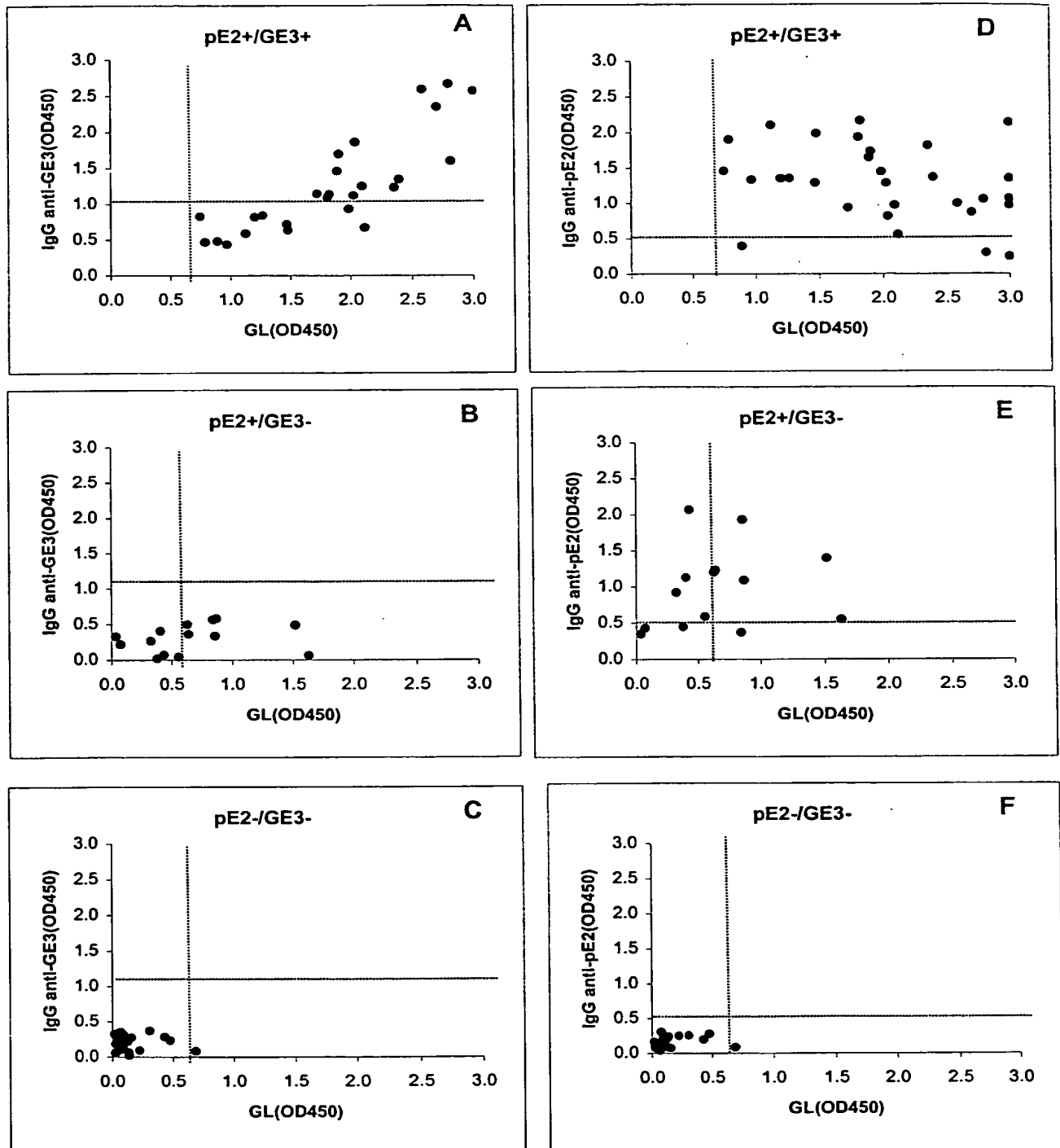


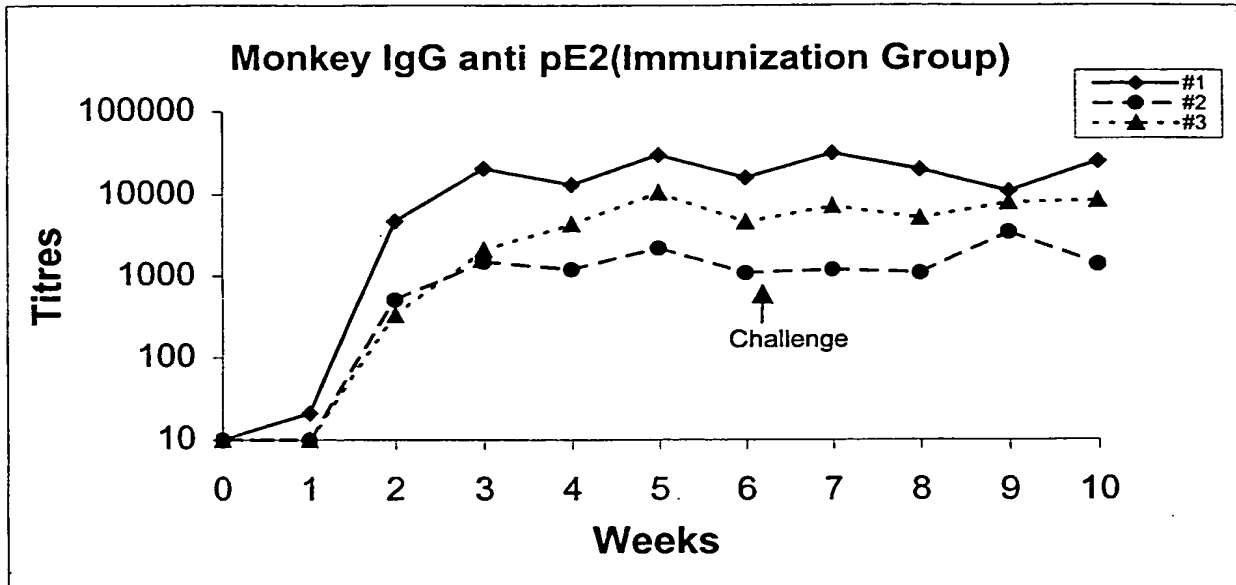
Figure 15

1 2 3 4 5 6 7

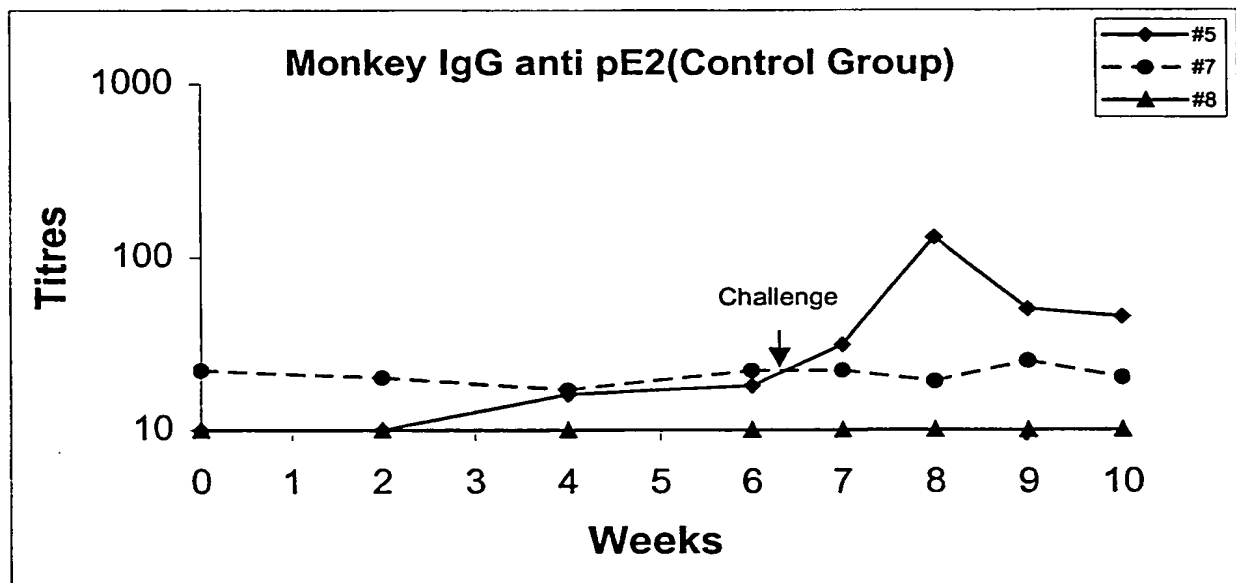


Figure 16

**Figure 17**

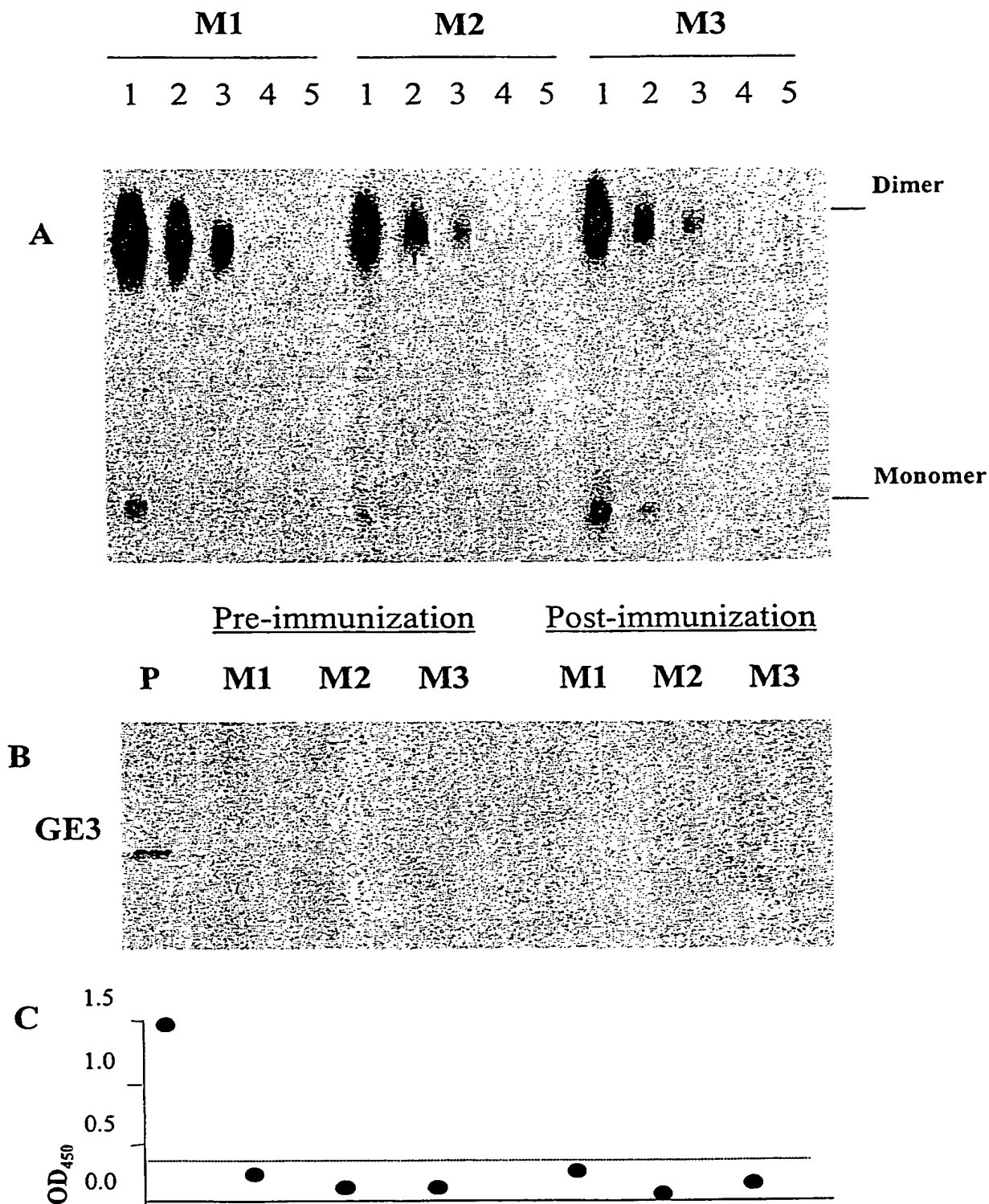


A



B

Figure 18

**Figure 19**

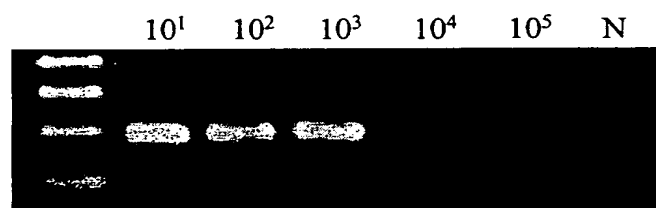
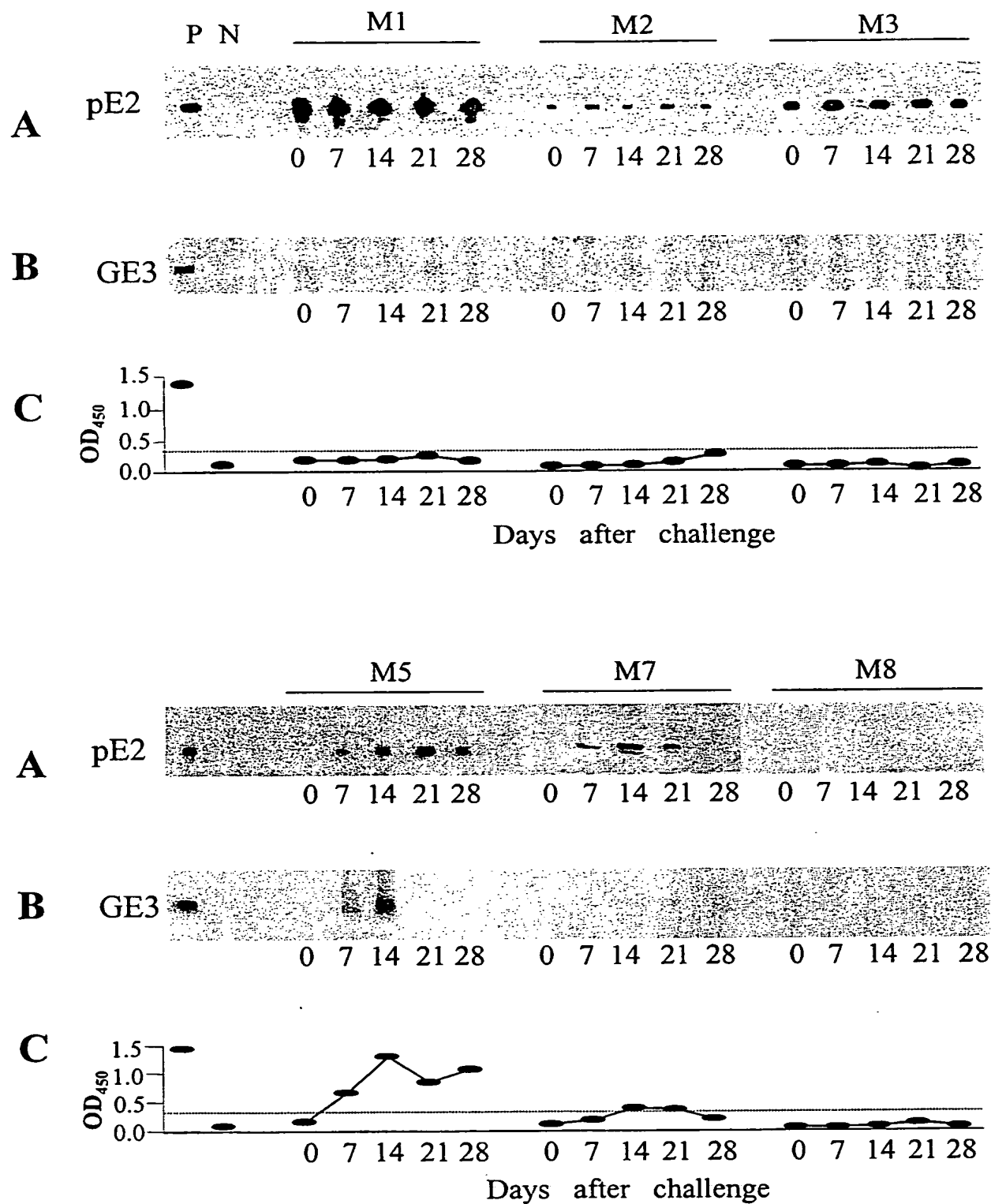


Figure 20

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**Figure 21**